Fuse protection

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Fuse protection

Fuse protection is an efficient and cost effective solution to protect low voltage equipment against short-circuit destructive consequences and damages incurred under overload conditions.

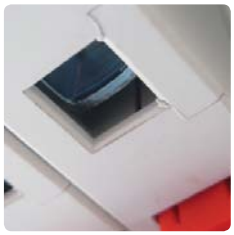
General characteristics

Ageing
Fuse element dedicated alloy makes fuses specially resistant to ageing effects.

Corrosion resistant
All metal parts are surface treated against corrosion.

Indicator
Clear indicator visibility on fuse status. Indicator conductor and spring are corrosion and ageing proof..

IP2X
Protection against direct finger contact on fuseholders and fuse disconnectors. Compact sizes.



→ *Time/current characteristics*

gG characteristic
General purpose cable and conductor protection.

aM characteristic
Motor and switchgear protection. Adapted to the starting current of motors and to the shortcircuit protection.

uR characteristic
Ultrarapid operation for semiconductor protection. such as diodes, thyristors, or AC/DC motor drives. "R" stands for rectifier. High breaking capacities

Fuse links

The fuse link is a component designed to cut off dangerous currents. It is attained by adapting fusible melting strips that divide the arc into several subarcs and cool them by means of the quartz sand. A limitation of the peak current is reached minimising electrodynamical load of the installation and protecting the equipment by limiting thermal let-through current.

Ranges
Cylindrical fuses UTE
Neozed fuses DO
Knife fuses NH

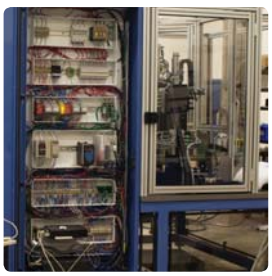
Fuse bases and switch disconnectors

Fuse disconnectors offer safe disconnection and isolation on low voltage circuits while providing fuse protection against overload and shortcircuit conditions. A modular system allows combination of individual components characterising a fast and easy installation.

Ranges
Cylindrical fuseholder disconnectors
Neozed fuse bases
NH Fuse bases
NH Disconnector fuse bases

Applications

- Distribution panels
- Automation equipment
- Control panels
- Motor protection
- Capacitor banks
- Machinery



➜ Protection

Peak current "limitation" minimises considerably the electrodynamic load of the installation and protects the equipment.

➜ Safety

No emission of gas, flames or arcs when clearing any value of overcurrent. Additionally the speed of operation on high short circuit currents limits significantly the flash hazard at the fault location.

➜ Reliability

No moving parts to wear out or become contaminated by dust, oil or corrosion and no nuisance tripping. Fuse replacement ensures protection is restored to its original state of integrity .

➜ Simple

Good selectivity minimises the part of the system effected by operation of protective device. High current limitation makes easy coordination between fuse links and other devices.

gG curve

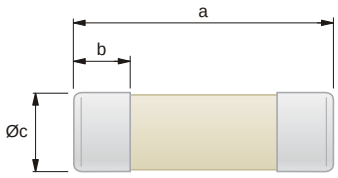
General characteristics

- Security fuses with silver-plated or nickel-plated contacts
- Silver-copper fuse element
- Steatite body with high resistivity to internal pressure
- Breaking capacity:
  - 120 kA - 500 V~
  - 80 kA - 660 V~

According to

- UNE 21103
- VDE 0636
- IEC 60269-2
- NFC63210

Dimensions



size	dimensions	a (mm)	b (mm)	Øc (mm)
00	8.5 x 31.5	31.5	6.3	8.5
0	10.3 x 38	38	9.4	10.3
1	14.3 x 51	51	11.3	14.3
2	22.2 x 58	58	14.7	22.2

8x31 - Size 00

References		In (A)	V	kA	Package
Standard	With fusing indicator				
29F2GL	29F2GLIF	2	400	20	10
29F4GL	29F4GLIF	4	400	20	10
29F6GL	29F6GLIF	6	400	20	10
29F10GL	29F10GLIF	10	400	20	10
29F16GL	29F16GLIF	16	400	20	10
29F20GL	29F20GLIF	20	400	20	10
29F25GL	29F25GLIF	25	400	20	10

10x38 - Size 0

References		In (A)	V	kA	Package
Standard	With fusing indicator				
30F05GL	-	0,5	500	120	10
30F1GL	-	1	500	120	10
30F2GL	30F2GLIF	2	500	120	10
30F4GL	30F4GLIF	4	500	120	10
30F6GL	30F6GLIF	6	500	120	10
30F8GL	30F8GLIF	8	500	120	10
30F10GL	30F10GLIF	10	500	120	10
30F12GL	30F12GLIF	12	500	120	10
30F16GL	30F16GLIF	16	500	120	10
30F20GL	30F20GLIF	20	500	120	10
30F25GL	30F25GLIF	25	500	120	10
30F32GL	30F32GLIF	32	400	120	10

gG curve

14x51 - Size 1

References		In (A)	V	kA	Package
Standard	With fusing indicator				
31F2GL	31F2GLIF	2	690	80	10
31F4GL	31F4GLIF	4	690	80	10
31F6GL	31F6GLIF	6	690	80	10
31F8GL	31F8GLIF	8	690	80	10
31F10GL	31F10GLIF	10	690	80	10
31F12GL	31F12GLIF	12	690	80	10
31F16GL	31F16GLIF	16	690	80	10
31F20GL	31F20GLIF	20	690	80	10
31F25GL	31F25GLIF	25	690	80	10
31F32GL	31F32GLIF	32	500	120	10
31F40GL	31F40GLIF	40	500	120	10
31F50GL	31F50GLIF	50	400	120	10

22x58 - Size 2

References		In (A)	V	kA	Package
Standard	With fusing indicator				
32F16GL	32F16GLIF	16	690	80	10
32F20GL	32F20GLIF	20	690	80	10
32F25GL	32F25GLIF	25	690	80	10
32F32GL	32F32GLIF	32	690	80	10
32F40GL	32F40GLIF	40	690	80	10
32F50GL	32F50GLIF	50	690	80	10
32F63GL	32F63GLIF	63	690	80	10
32F80GL	32F80GLIF	80	500	120	10
32F100GL	32F100GLIF	100	500	120	10
32F125GL	32F125GLIF	125	400	120	10

aM curve

10x38 - Size 0

References		In (A)	V	kA	Package
Standard	With fusing indicator				
30F1AM	-	1	500	120	10
30F2AM	30F2AMIF	2	500	120	10
30F4AM	30F4AMIF	4	500	120	10
30F6AM	30F6AMIF	6	500	120	10
30F8AM	30F8AMIF	8	500	120	10
30F10AM	30F10AMIF	10	500	120	10
30F12AM	30F12AMIF	12	500	120	10
30F16AM	30F16AMIF	16	500	120	10
30F20AM	30F20AMIF	20	500	120	10
30F25AM	30F25AMIF	25	500	120	10
30F32AM	30F32AMIF	32	400	120	10

14x51 - Size 1

References		In (A)	V	kA	Package
Standard	With fusing indicator				
31F2AM	31F2AMIF	2	690	80	10
31F4AM	31F4AMIF	4	690	80	10
31F6AM	31F6AMIF	6	690	80	10
31F8AM	31F8AMIF	8	690	80	10
31F10AM	31F10AMIF	10	690	80	10
31F12AM	31F12AMIF	12	690	80	10
31F16AM	31F16AMIF	16	690	80	10
31F20AM	31F20AMIF	20	690	80	10
31F25AM	31F25AMIF	25	690	80	10
31F32AM	31F32AMIF	32	500	120	10
31F40AM	31F40AMIF	40	500	120	10
31F50AM	31F50AMIF	50	400	120	10

aM curve

22x58 - Size 2

References		In (A)	V	kA	Package
Standard	With fusing indicator				
32F16AM	32F16AMIF	16	690	80	10
32F20AM	32F20AMIF	20	690	80	10
32F25AM	32F25AMIF	25	690	80	10
32F32AM	32F32AMIF	32	690	80	10
32F40AM	32F40AMIF	40	690	80	10
32F50AM	32F50AMIF	50	690	80	10
32F63AM	32F63AMIF	63	690	80	10
32F80AM	32F80AMIF	80	500	120	10
32F100AM	32F100AMIF	100	500	120	10
32F125AM	32F125AMIF	125	400	120	10

Neutral links

References	Size	Package
0NEUTRO	size 0	10
1NEUTRO	size 1	10
2NEUTRO	size 2	10

Neozed fuses

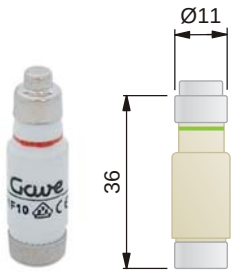
The D0-System, sometimes called NEOZED, is smaller than the DIAZED system, and does have a lower power dissipation, but also a lower rated voltage (400V~).
Care should be taken in all cases to ensure heat dissipation away from the fuse link to the surrounding ambient. In cases of enclosures and tight packing of fuses, a derating might be needed.

General characteristics

- High breaking capacity up to 120 kA at 500 V AC
- Strong limiting capacity of the electro dynamic short circuit effects
- Simple and efficient selectivity

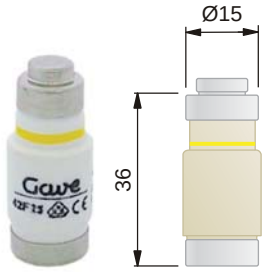
According to

- IEC 60269-1
- IEC 60269-2
- VDE 0680
- VDE -DIN 0636/21
- DIN 43620



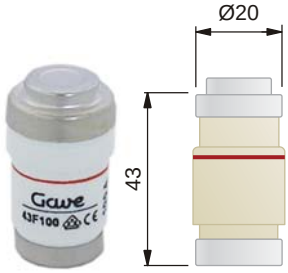
Size D01

References	Type	In (A)	Colour	weight kg/piece	Package
41F2	E 14	2 A	pink	0.006	10
41F4	E 14	4 A	brown	0.006	10
41F6	E 14	6 A	green	0.006	10
41F10	E 14	10 A	red	0.006	10
41F16	E 14	16 A	grey	0.006	10



Size D02

References	Type	In (A)	Colour	weight kg/piece	Package
42F20	E 18	20 A	blue	0.01	10
42F25	E 18	25 A	yellow	0.01	10
42F35	E 18	35 A	black	0.01	10
42F50	E 18	50 A	white	0.01	10
42F63	E 18	63 A	copper	0.01	10



Size D03

References	Type	In (A)	Colour	weight kg/piece	Package
43F80	M 30 x 2	80 A	silver	0.04	10
43F100	M 30 x 2	100 A	red	0.04	10

NH fuses

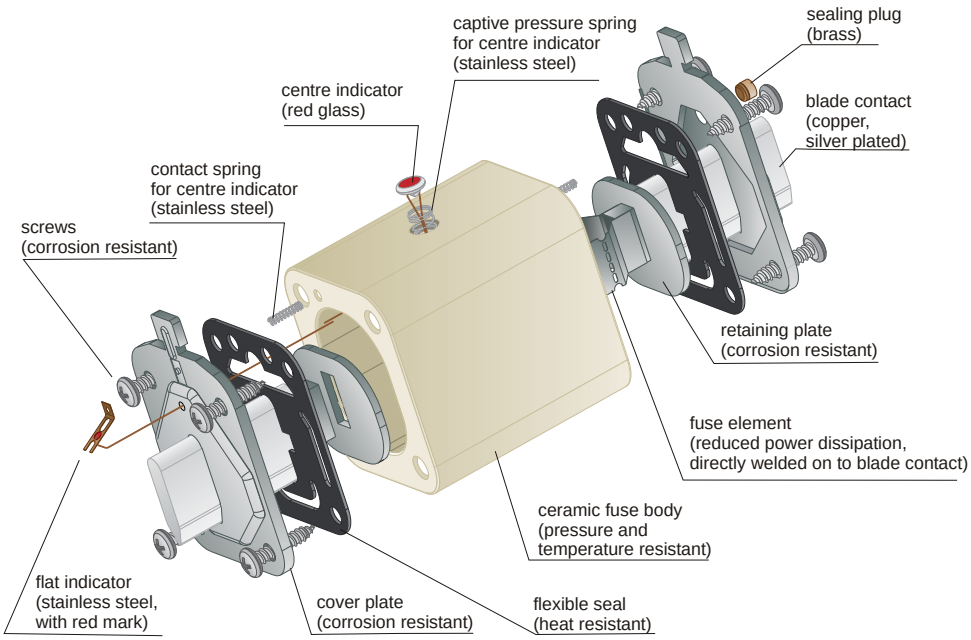
Industrial fuses are designed to protect installations and equipment against overload and short-circuit currents on low voltage electrical circuits.

According to

- IEC 60269-1
- IEC 60269-2
- VDE 0680
- VDE -DIN 0636/21
- DIN 43620

General characteristics

- High breaking capacity up to 120 kA at 500V AC
- Optimal selectivity
- Low power dissipation



With fusing indicator - gG curve

Size 00

References	In (A)	V	kA	Package
66920010	10	500	120	3
66920016	16	500	120	3
66920020	20	500	120	3
66920025	25	500	120	3
66920032	32	500	120	3
66920040	40	500	120	3
66920050	50	500	120	3
66920063	63	500	120	3
66920080	80	500	120	3
66920100	100	500	120	3
66920125	125	500	120	3
66920160	160	500	120	3

10-100A size 000

Size 0

References	In (A)	V	kA	Package
67020016	16	500	120	3
67020020	20	500	120	3
67020025	25	500	120	3
67020032	32	500	120	3
67020040	40	500	120	3
67020050	50	500	120	3
67020063	63	500	120	3
67020080	80	500	120	3
67020100	100	500	120	3
67020125	125	500	120	3
67020160	160	500	120	3

Size 1

References	In (A)	V	kA	Package
67120063	63	500	120	3
67120080	80	500	120	3
67120100	100	500	120	3
67120125	125	500	120	3
67120160	160	500	120	3
67120200	200	500	120	3
67120250	250	500	120	3

Size 2

References	In (A)	V	kA	Package
67220160	160	500	120	3
67220200	200	500	120	3
67220250	250	500	120	3
67220315	315	500	120	3
67220355	355	500	120	3
67220400	400	500	120	3

Size 3

References	In (A)	V	kA	Package
67320315	315	500	120	3
67320400	355	500	120	3
67320425	400	500	120	3
67320500	500	500	120	3
67320630	630	500	120	3

Size 4

References	In (A)	V	kA	Package
67420630	630	500	120	1
67420800	800	500	120	1
67421000	1000	500	120	1
67421200	1250	500	120	1

With fusing indicator - aM curve

Size 00

References	In (A)	V	kA	Package
66930010	10	690	120	3
66930016	16	690	120	3
66930020	20	690	120	3
66930025	25	690	120	3
66930032	32	690	120	3
66930040	40	690	120	3
66930050	50	690	120	3
66930063	63	690	120	3
66930080	80	690	120	3
66930100	100	690	120	3
66930125	125	690	120	3
66930160	160	690	120	3

Size 0

References	In (A)	V	kA	Package
67030016	16	690	120	3
67030020	20	690	120	3
67030025	25	690	120	3
67030032	32	690	120	3
67030040	40	690	120	3
67030050	50	690	120	3
67030063	63	690	120	3
67030080	80	690	120	3
67030100	100	690	120	3
67030125	125	690	120	3
67030160	160	690	120	3

Size 1

References	In (A)	V	kA	Package
67130063	63	690	120	3
67130080	80	690	120	3
67130100	100	690	120	3
67130125	125	690	120	3
67130160	160	690	120	3
67130200	200	690	120	3
67130250	250	690	120	3

Size 2

References	In (A)	V	kA	Package
67230160	160	690	120	3
67230200	200	690	120	3
67230250	250	690	120	3
67230315	315	690	120	3
67230355	355	690	120	3
67230400	400	690	120	3

Size 3

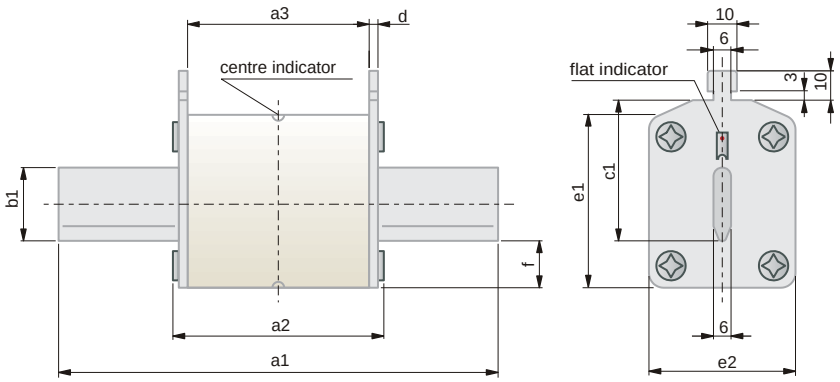
References	In (A)	V	kA	Package
67330315	315	690	120	3
67330400	355	690	120	3
67330500	400	690	120	3
67330630	500	500	120	3
67320630	630	500	120	3

Size 4

References	In (A)	V	kA	Package
67430630	630	500	120	1
67430800	800	500	120	1
67431000	1000	500	120	1
67431200	1250	500	120	1

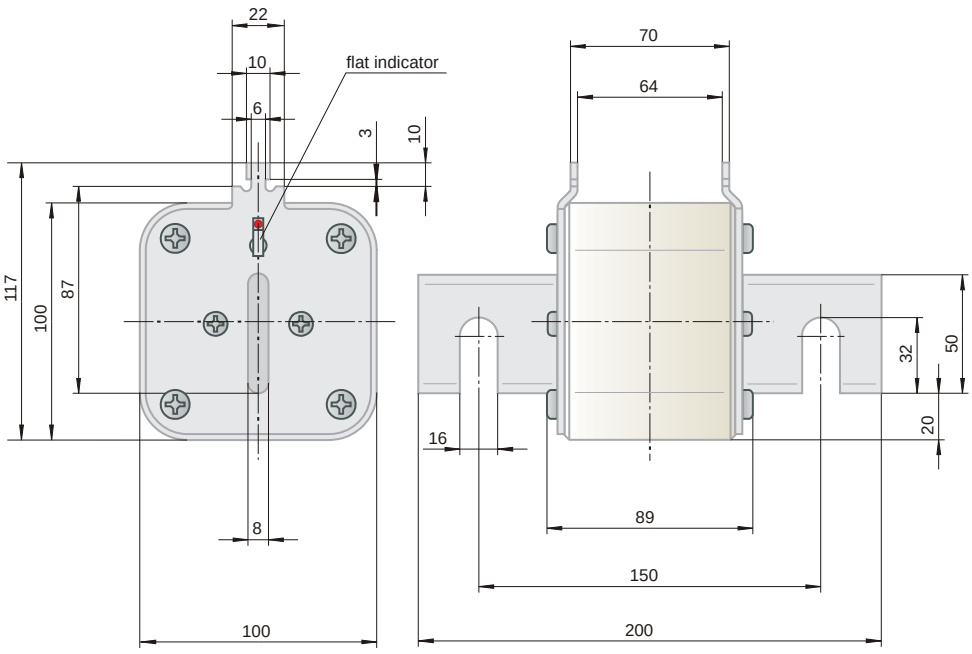
Dimensions

Sizes 00,0,1,2 and 3



Size	A1	A2	A3	B1	C1	D	E1	E2	F
00	78	52	44	15	35	2·5	40	30	8
						2	47		14
0	125	68	62	15	35	2·5	40	30	8
1	135	72	62	15	40	2·5	40	30	8
				20			48	40	12
		73	64	15		2	47	30	14
		72	62	20			53	42	
2	150	72	62	20	48	2·5	48	40	12
				25			59	50	
		74	64	20		2	53	42	14
				25			60	53	
3	150	73	62	25	60	2·8	59	50	13
				32			71	71	17
		74	64	25		2	60	53	14
		73	62	32			75	73	17

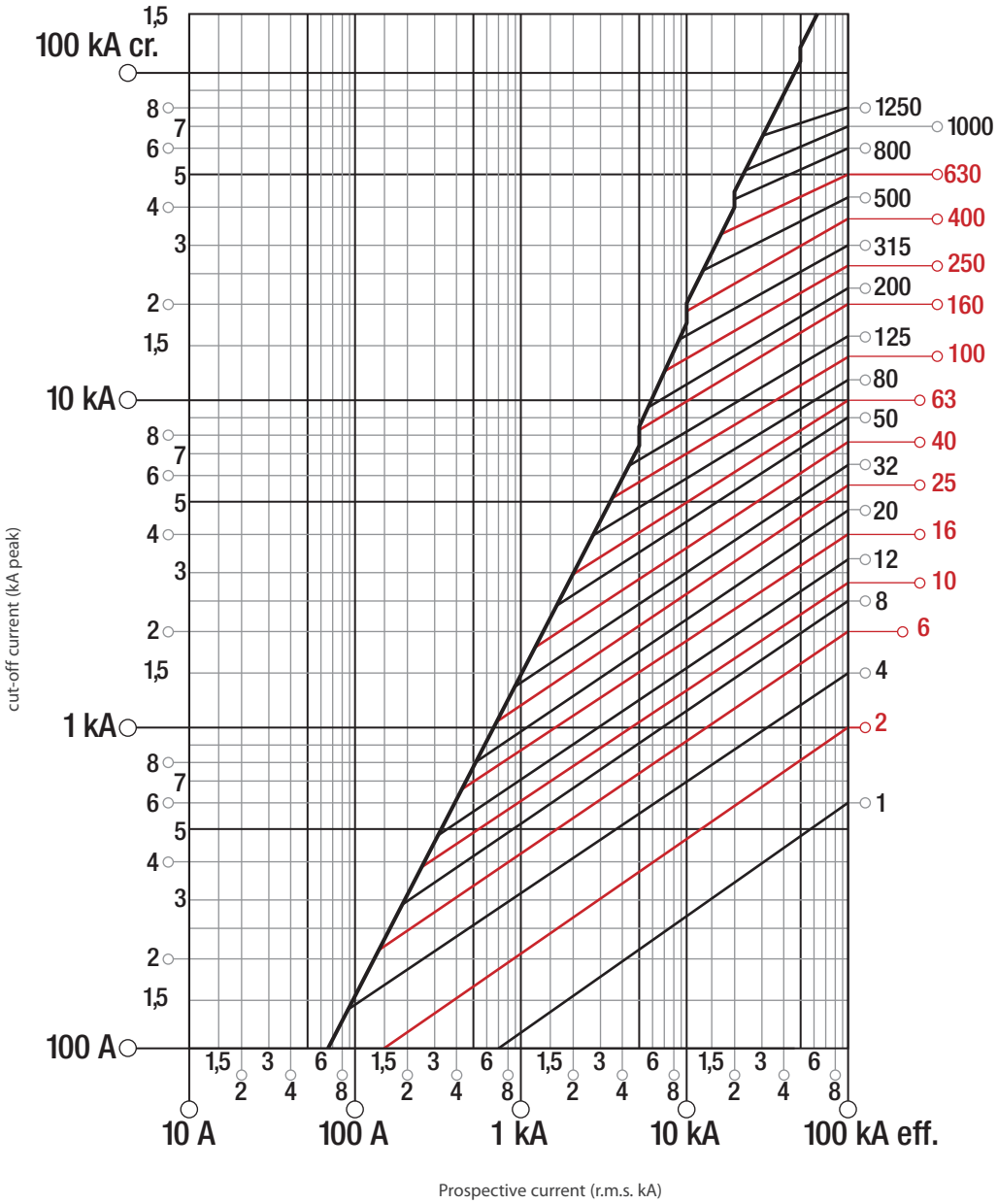
Sizes 4



Fuse charateristics curves

gG fuses

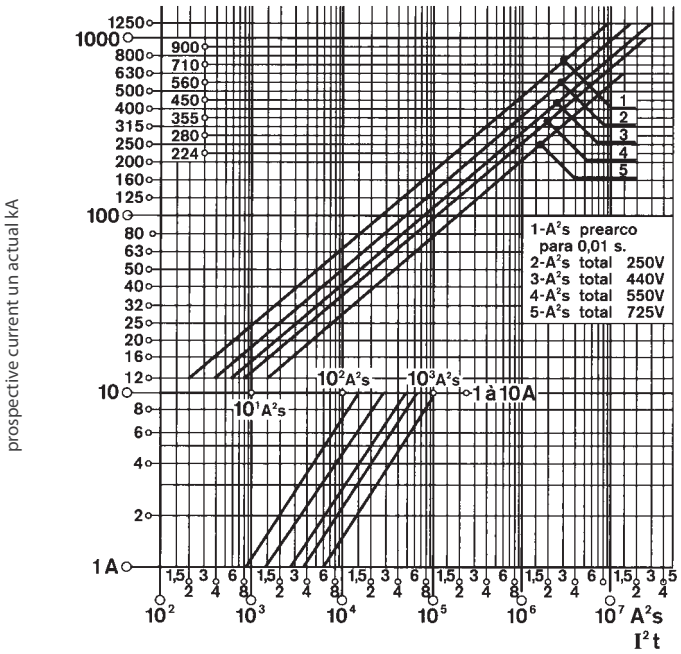
Current cut-off diagram



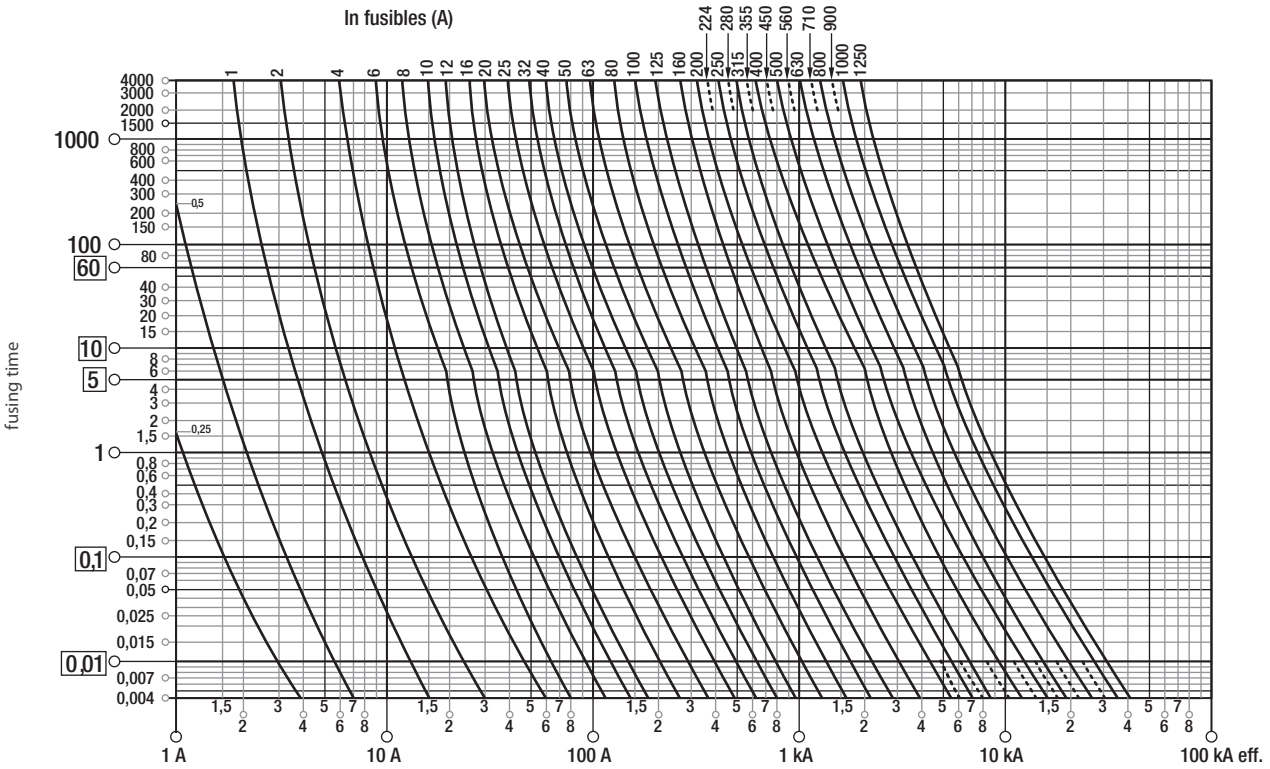
Fuse characteristics curves

gG fuses

Thermal characteristics diagram



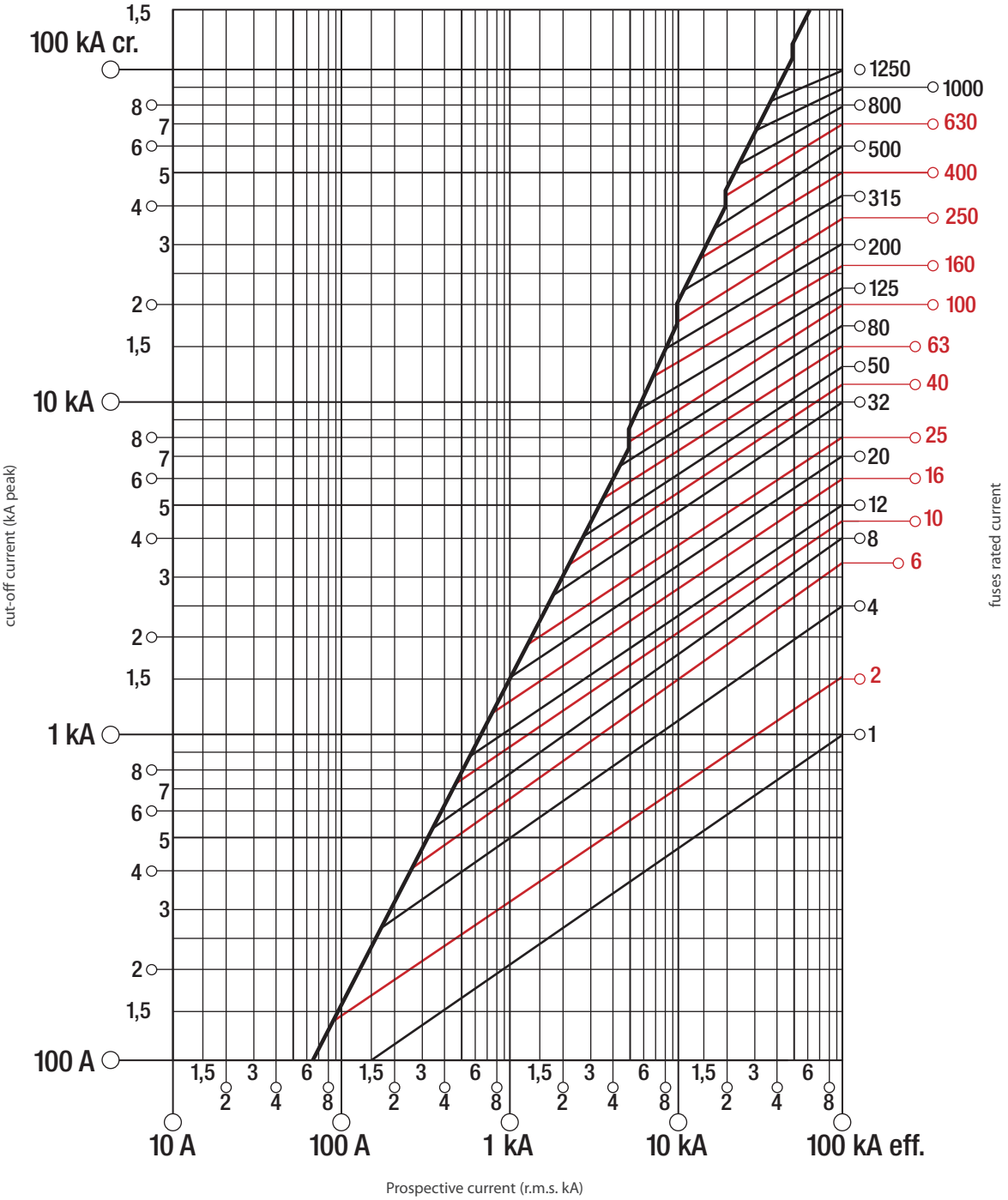
Time/current operating characteristics



Fuse characteristics curves

aM fuses

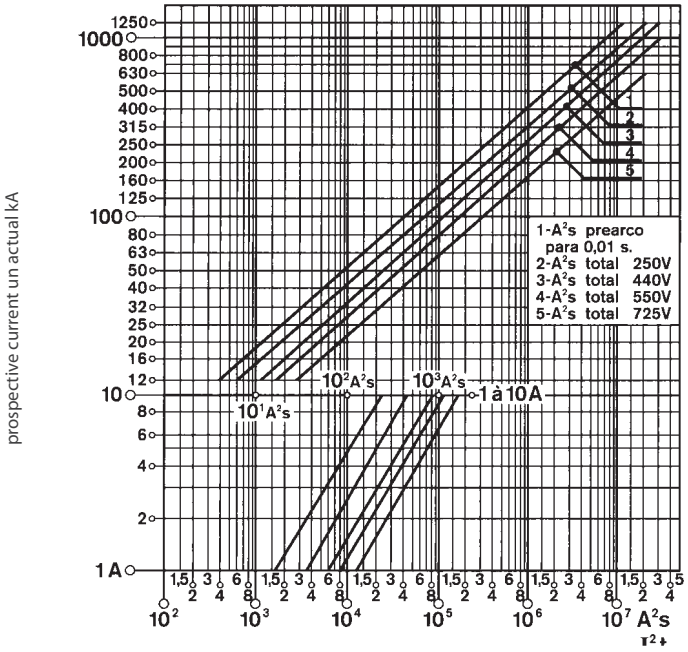
Current cut-off diagram



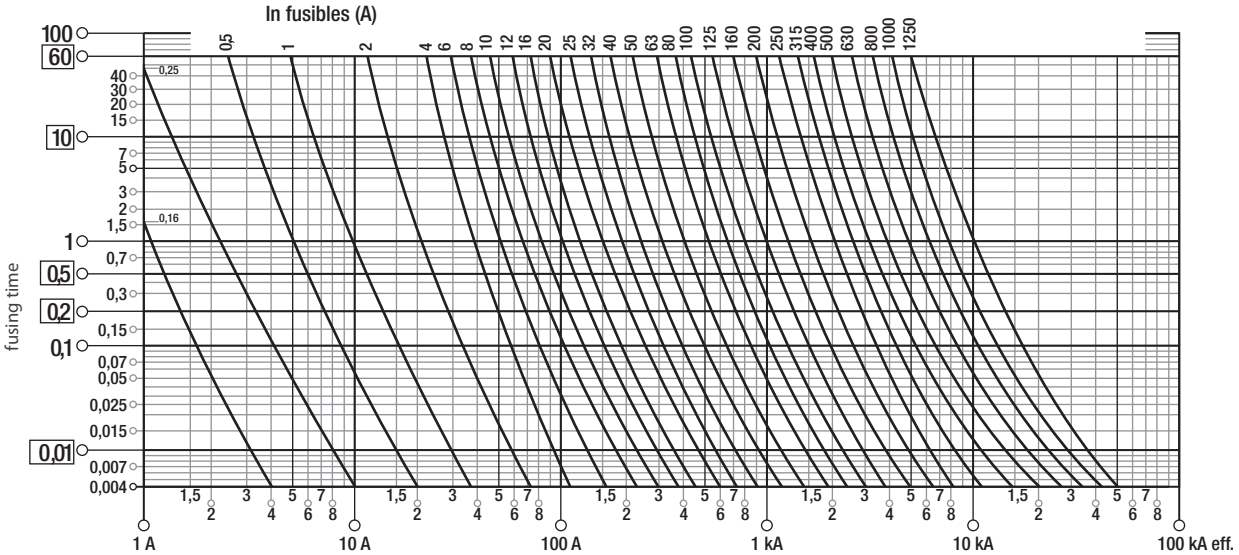
Fuse characteristics curves

aM fuses

Thermal characteristics diagram



Time/current operating characteristics



New AKB range of modular industrial fuseholders

«Designed to guarantee safety disconnection and equipment protection on your low voltage power and control circuits»

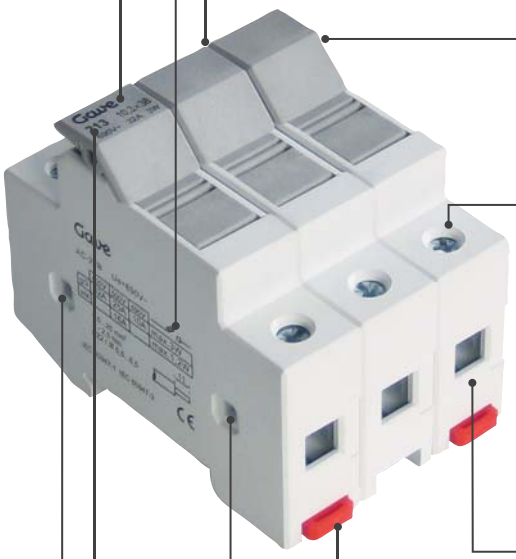
Designed by experience

The new range of modular fuseholders is the outcome of extensive experience on the field of fuse protection. This **complete range** comprises four standard sizes plus a DC model. We have combined modern look with ergonomic **design** and provided the range with **mounting flexibility** using multipole assembly kits.

Modular
All sizes can be installed on 45mm cut out modular distribution panels.

Ergonomic handle
Adapted shape for easy access and operation

Marking
Easy to identify. Reference and basic data visible on front handle. Electrical characteristics on the side.



Pozidrive screws
Strong grip for optimal torque tightening

Assembly kits
Push in clips and pins for multipole assemblies.

Protection degree IP20
Protected against accidental finger contact.

Fixing Clip
Din rail fixing mechanism easy to access and smooth slide on removal operations.

General characteristics

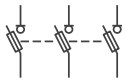
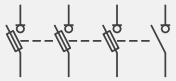
- On load breaking fuse disconnectors.
- Easy and quick DIN rail mounting.
- High insulation voltage rating.
- Resistant to abnormal heat and fire (Glow wire flammability test at 960ºC according to IEC 695-2-1)
- Elevated vibration withstand.
- DIN modular range (45mm cut out)
- Multipole assemblies.
- Contact surfaces silver plated.

According to standards

- IEC 60947-1
- IEC 60947-3

Size 00

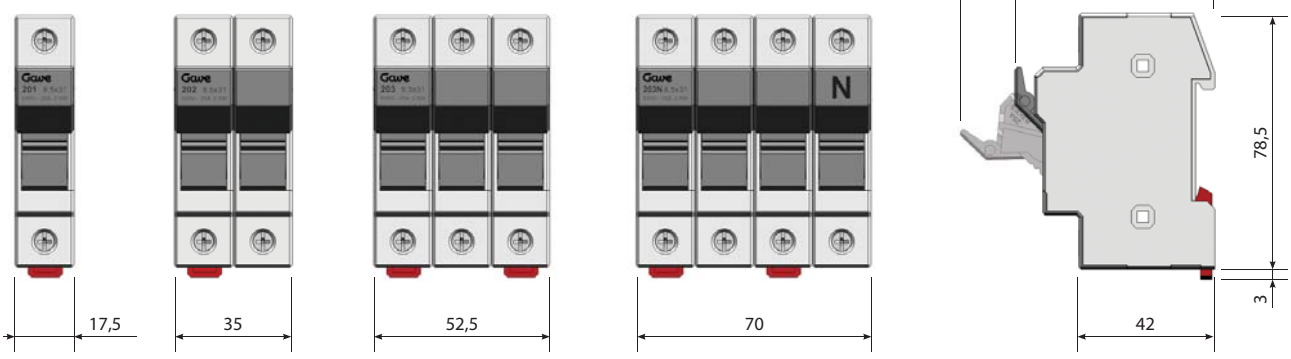
- Modular 45 mm cut out - 1 module (17,5mm) X pole.
- Mounting 35mm DIN rail.
- Simultaneous breaking on multipole versions.
- High temperature resistant plastics.

References	Thermal rating	Fuse size	Poles	Modules	Electrical diagram	Package
201	25 A	8,5 x 31,5	1P	1		12
202	25 A	8,5 x 31,5	2P	2		6
203	25 A	8,5 x 31,5	3P	3		4
203N	25 A	8,5 x 31,5	3P+N	4		3

Assembly kits

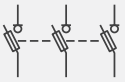
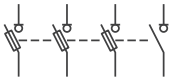
Reference	Description	Package
21KE	multipolar assembly kit s.00&0 (2 clips + 1 Pin)	12

Dimensions



Size 0

- Modular 45 mm cut out - 1 module (17,5mm) X pole.
- Mounting 35mm DIN rail.
- Simultaneous breaking on multipole versions.
- High temperature resistant plastics.

References	Thermal rating	Fuse size	Poles	Modules	Electrical diagram	Package
211	32 A	10 x 38	1P	1		12
211N	32 A	10 x 38	1P+N	2		6
212	32 A	10 x 38	2P	2		6
213	32 A	10 x 38	3P	3		4
213N	32 A	10 x 38	3P+N	4		3

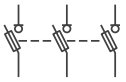
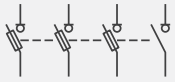
Assembly kits

Reference	Description	Package
21KE	multipolar assembly kit s.00&0 (2 clips + 1 Pin)	12

Dimensions

Size 1

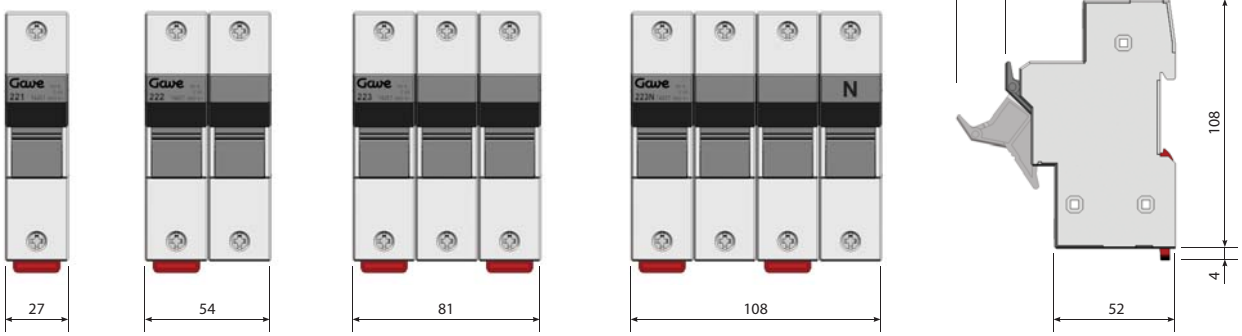
- Modular 45 mm cut out - 1,5 module (27mm) X pole.
- Mounting 35mm DIN rail.
- Simultaneous breaking on multipole versions.
- Ergonomic handle.
- High temperature resistant plastics.

References	Thermal rating	Fuse size	Poles	Modules	Electrical diagram	Package
221	50 A	14 x 51	1P	1		6
222	50 A	14 x 51	2P	2		3
223	50 A	14 x 51	3P	3		2
223N	50 A	14 x 51	3P+N	4		1

Assembly kits

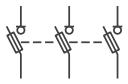
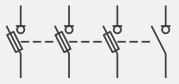
Reference	Description	Package
23KE	multipolar assembly kit s.1&2 (3 clips + 1 Pin)	10

Dimensions



Size 2

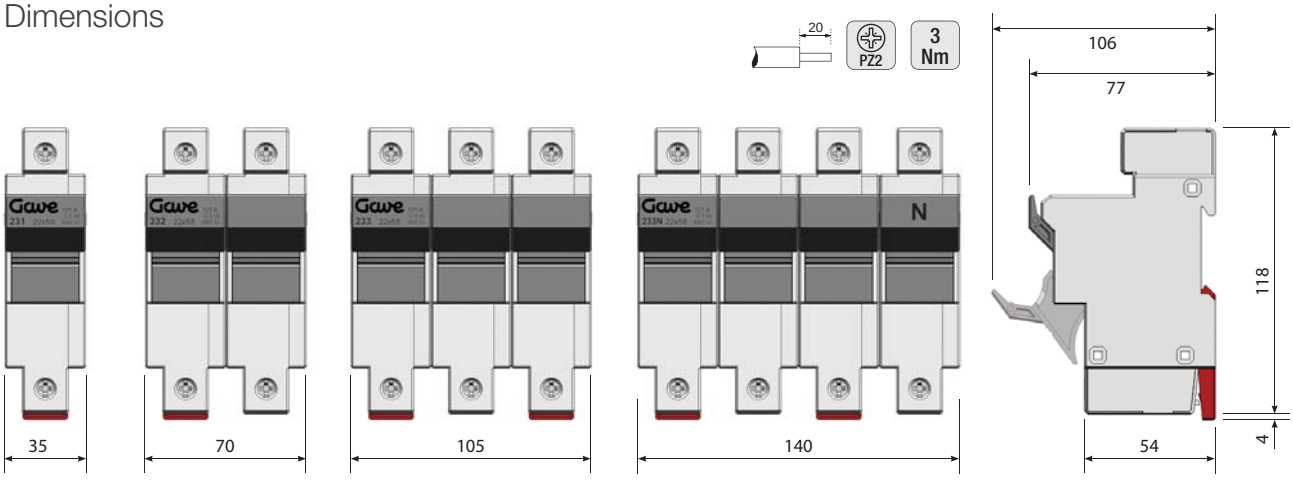
- Modular 45 mm cut out - 2 module (35mm) X pole .
- Mounting 35mm DIN rail.
- Simultaneous breaking on multipole versions.
- Ergonomic handle.
- High temperature resistant plastics.

References	Thermal rating	Fuse size	Poles	Modules	Electrical diagram	Package
231	125 A	22 x 58	1P	1		3
232	125 A	22 x 58	2P	2		2
233	125 A	22 x 58	3P	3		3
233N	125 A	22 x 58	3P+N	4		1

Assembly kits

Reference	Description	Package
23KE	multipolar assembly kit s.1&2 (3 clips + 1 Pin)	10

Dimensions



Photovoltaic installations

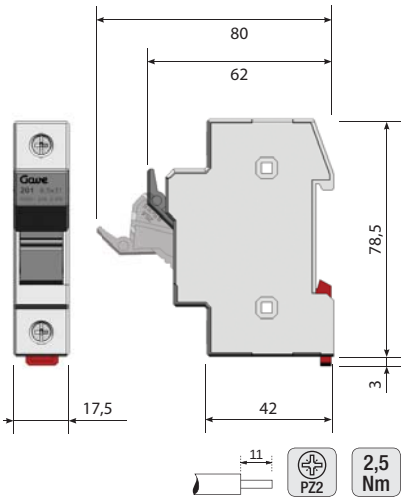
Characteristics

- 1000V cc DC-20B.
- Modular 45 mm cut out - 1 module (17,5mm) X pole.
- Mounting 35mm DIN rail.
- High temperature resistant plastics.
- Elevated insulation characteristics.

According to

- IEC 60947-1
- IEC 60947-3

Dimensions



References	Thermal rating	Fuse size	Poles	Modules	Package
211PV	32 A	10 x 38	1P	1	12

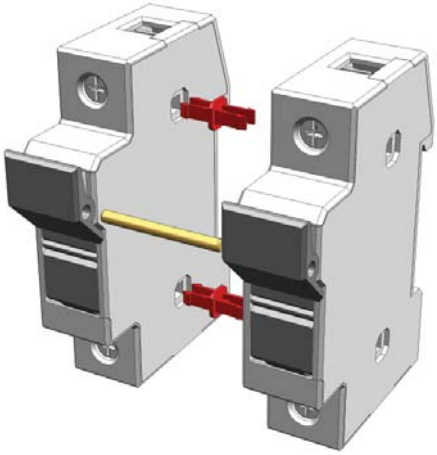
Multipole assemblies

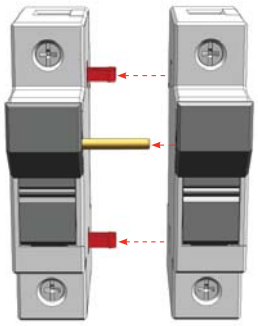
Each bag of kits size 00&0 is sufficient for:

- 12 multipole assemblies.
- 12 two pole assemblies.
- 6 three pole assemblies.
- 4 four pole assemblies.

Each bag of kits size 1&2 is sufficient for:

- 10 multipole assemblies.
- 10 two pole assemblies.
- 5 three pole assemblies.
- 3 four pole assemblies.





	Size 00	Size 0	Size 1	Size 2
nº pins/union	1	1	1	1
nº clips/union	2	2	3	3

Technical data

		Size 00		Size 0 DC		Size 0		Size 1		Size 2	
fuse size		8,5 x 31,5		10 x 38		10 x 38		14 x 51		22 x 58	
rated current	Ith (A)										
	gG 400V	25		32		32		50		125*	
	gG 500V	20		25		25		50		100	
	gG 690V			10		10		25		50	
	aM 400V	-		-		-		50		125*	
	aM 500V	-		16		16		40		100	
	aM 690V	-		-		-		25		50	
rated power dissipation	W										
	gG fuse	2,5		3		3		5		9,5	
	aM fuse	-		1,2		1,2		3		7	
rated impulse withstand voltage	Uimp kV	6		6		6		8		8	
max.operating voltage	Ue V~	400		1000 Vdc		690		690		690	
operating category		AC-22B		DC-20		AC-22B		AC-22B		AC-21B	
wire section		min.	máx	min.	máx	min.	máx	min.	máx	min.	máx
stranded	mm^2	1x1,5	1x25 2x10	1x1,5	1x25 2x10	1x1,5	1x25 2x10	1x1,5	1x35 2x16	1x4	1x50 2x25
flexible	mm^2	1x1,5	1x25 2x10	1x1,5	1x25 2x10	1x1,5	1x25 2x10	1x1,5	1x35 2x16	1x4	1x50 2x25
torque	Nm	2 - 2,5		2 - 2,5		2 - 2,5		2,5 - 3		2,5 - 3	
connection screws / Pz2	Ø	5,5 - 6,5		5,5 - 6,5		5,5 - 6,5		5,5 - 6,5		5,5 - 6,5	
flame Resistant IEC 60695-2-1		960 ºC		960 ºC		960 ºC		960 ºC		960 ºC	

*125A intermitent use (100A continuous use)

Derating table

		Size 00	Size 0	Size 1	Size 2
In / Un 400V~	A	25	32	50	125
In / Un 500V~	A	20	20	40	80
Acc. ambient temperature					
20 º C		1	1	1	1
30 º C		0,95	0,95	0,95	0,95
40 º C		0,90	0,90	0,90	0,90
50 º C		0,80	0,80	0,80	0,80
Acc. number of poles					
1-3 phases		1	1	1	1
4-6 phases		0,8	0,8	0,8	0,8
7-9 phases		0,7	0,7	0,7	0,7
>10 phases		0,6	0,6	0,6	0,6

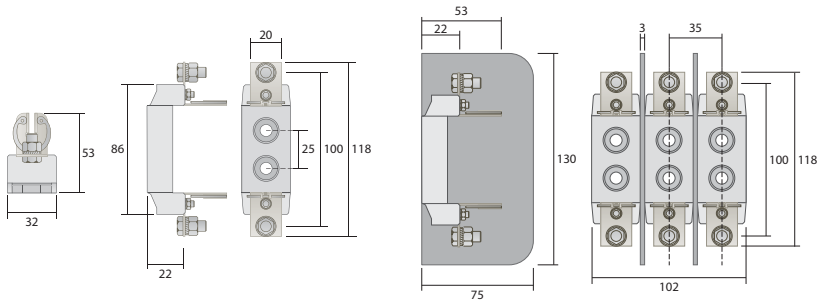
NH fuse bases

- Single-pole and triple-pole AKB-NH fuse base up to 1250A
- Panel fastening
- Screw connection
- Contact clips with elastic springs securing the pressure on the fuse (on size 4, the pressure is secured by screw)
- Polyester base reinforced with fiber glass
- Phases spliter to group single-pole fuse bases
- Strapped clamps for a better connection
- Triple-pole bases supplied with phase spliters

Size 00

References	Fuse size	In (A)	Poles	Package
511	NH00	160 A	1	3
513	NH00	160 A	3	1

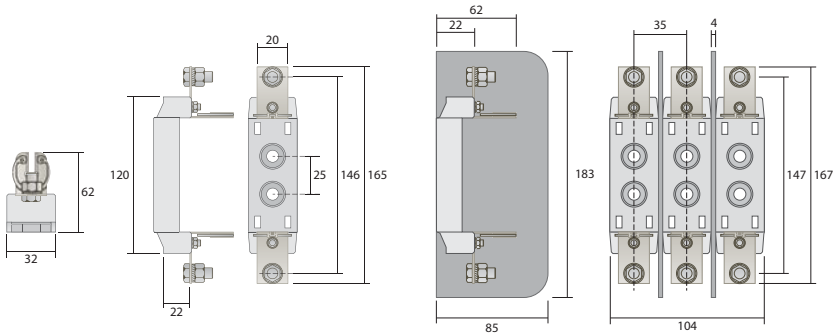
Dimensions



Size 0

References	Fuse size	In (A)	Poles	Package
521	NH0	160 A	1	3
523	NH0	160 A	3	1

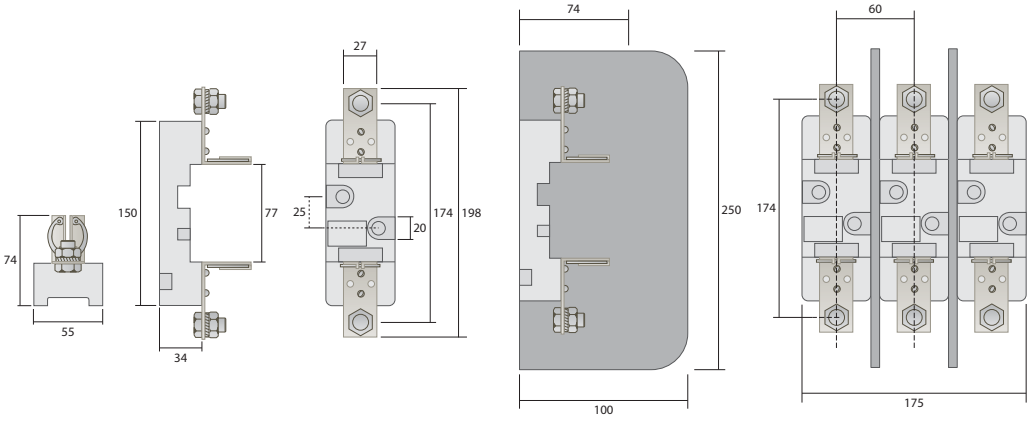
Dimensions



Size 1

References	Fuse size	In (A)	Poles	Package
531	NH1	250 A	1	3
533	NH1	250 A	3	1

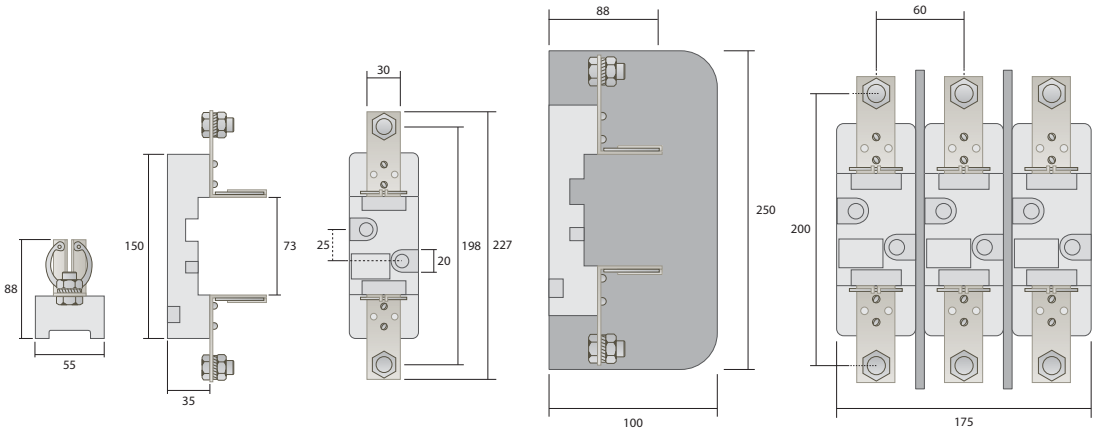
Dimensions



Size 2

References	Fuse size	In (A)	Poles	Package
541	NH2	400 A	1	3
543	NH2	400 A	3	1

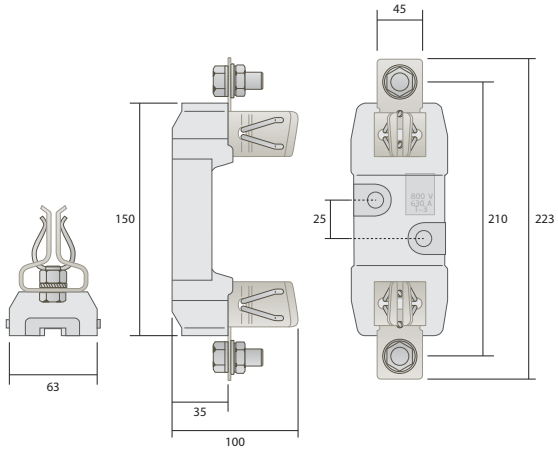
Dimensions



Size 3

References	Fuse size	In (A)	Poles	Package
551	NH3	630 A	1	3
553	NH3	630 A	3	1

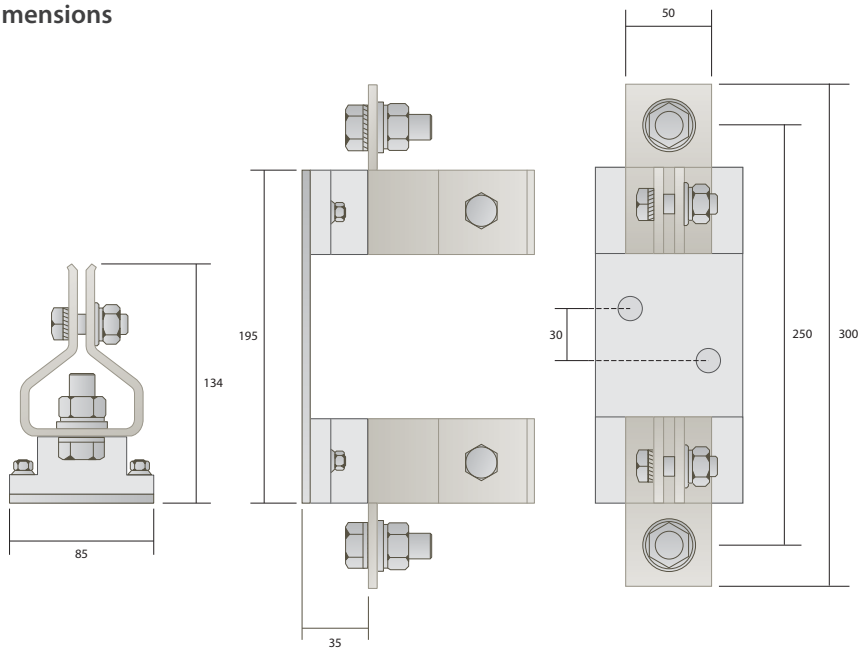
Dimensions



Size 4

References	Fuse size	In (A)	Poles	Package
561	NH4	1250 A	1	1

Dimensions



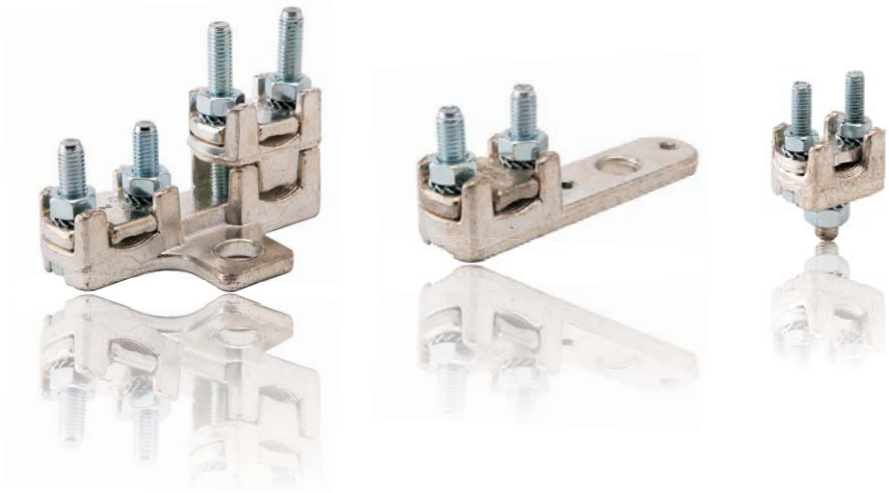
Accessories

Isolating plate

References	Description	Package
51SEP	Plate for NH base size 00	1
52SEP	Plate for NH base size 0	1
53SEP	Plate for NH base size 1-2	1
55SEP	Plate for NH base size 3	1
56SEP	Plate for NH base size 4	1

Extraction Handle

References	Description	Package
64010011	Extraction handle for NH fuse	1



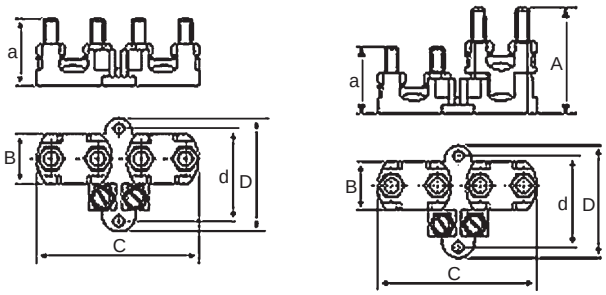
Bimetal clamps

Parallel Bimetal Clamps

- Parallel clamps permit to split and distribute connections on large conducting units.

References	Fuse size	Conn.	Sec. max	Sec. min.	a	A	B	C	D	d	Pack.
5195P.2	00-0	1+1	95	10	35	35	24	80	59	42	1
5195P.3	00-0	1+2	95	10	48	55	24	80	59	42	1
5195P.4	00-0	2+2	95	10	55	55	24	80	59	42	1
53150P.2	1	1+1	150	16	41	41	27	96	63	44	1
53150P.3	1	1+2	150	16	41	66	27	96	63	44	1
53150P.4	1	2+2	150	16	66	66	27	96	63	44	1
54240P.2	2	1+1	240	50	47	47	36	117	71	53	1
54240P.3	2	1+2	240	50	47	97	36	117	71	53	1
54240P.4	2	2+2	240	50	97	97	36	117	71	53	1

Dimensions

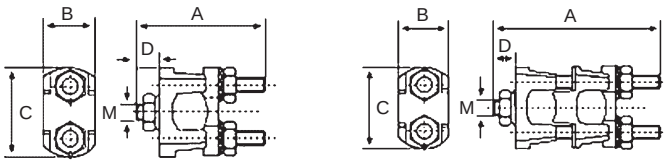


Studded Bimetal Clamps

- These terminals are designed to connect fuse bases (NH) and cooper bars.
- They offer great flexibility on connection from all directions.

References	Fuse size	Conn.	Sec. max	Sec. min.	A	B	C	D	M	Package
5150	00	1	50	6	42	18	27	13	6	1
5150.2	00	2	50	6	48	18	27	13	6	1
5195	00-0	1	95	10	52	24	34	16	8	1
5195.2	00-0	2	95	10	72	24	34	16	8	1
53150	1	1	150	16	58	26	42	17	10	1
53150.2	1	2	150	16	84	26	42	17	10	1
54240	2-3	1	240	50	68	35	53	20	12	1
54240.2	2-3	2	240	50	116	35	53	20	12	1

Dimensions

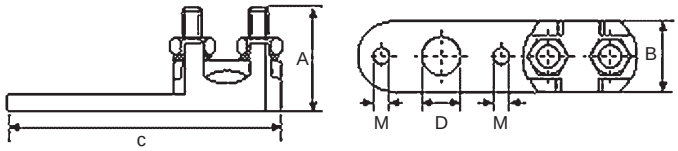


Side Bimetal Clamps

- Allows lateral connections and derivations in all type of electrical assemblies.

References	Fuse size	Conn.	Sec. max	Sec. min.	A	B	C	D	M	Package
5195B	00-0	1	95	10	35	25	94	12	M6	1
53150B	1	1	150	16	41	26	102	12	M6	1

Dimensions



Shovel Bimetal Connection Clamps

- Designed to connect power circuit breakers. Protection caps for safety insulation should be used.

References	Fuse size	Conn.	Sec. max	Sec. min.	A	B	C	D	E	F	Pack.
5150S	00-0	1	50	6	29	19	29	46	5	7,5	1
5150S.2	00-0	2	50	6	34	19	29	46	5	7,5	1
PR50	Protection cap										1

Dimensions

NH fuse switch disconnectors

Gave introduces a new range of NH fuse switch disconnectors characterised by its wide range of size , modularity and scope of accessories.

Functions

NH fuse switch disconnectors are used on low voltage electrical systems that require high protection against shortcircuit while securing on load circuit disconnection and isolation. We can find application on switchboard, distribution systems, OEM,..

According to standards

- IEC/EN 60 947-3
- VDE 0660 / part 100
- IEC/EN 60 269-2-1
- VDE 0636 / part 201

General characteristics

- Five sizes available from 000 to 3 (100A up to 630A).
- Range uniformity and modularity.
- Size 00 and 1 offer single pole, double pole, triple pole and quadruple pole models.
- Mounting options. Size 000 DIN rail or base mounting. Other sizes base mounting or busbar mounting.
- Installation flexibility vertical or horizontal. Sizes 00,1 and 2.
- Self extinguishing halogen free materials.

Locking and sealing devices

Parking position of switch operating cover

Easy direct installation by snapping on to the bus bars

Touch protection IP20 – when fuse link is in test mode IP rating is maintained

New features

Base

Manufactured of strengthened fiber glass, thermically high stable, self extinguishing synthetic material halogen free. Copper contacts are galvanic surface coated. Contact springs are made of stainless steel. Symmetrical switch suitable for bottom / top cable terminal connections.

Cover

The switch operating cover consists of strengthened fiber glass self extinguishing thermoplastic material halogen free. Supplied with large windows which enable label and fuse link indicator to be clearly seen. Ergonomic handle for easy operation.

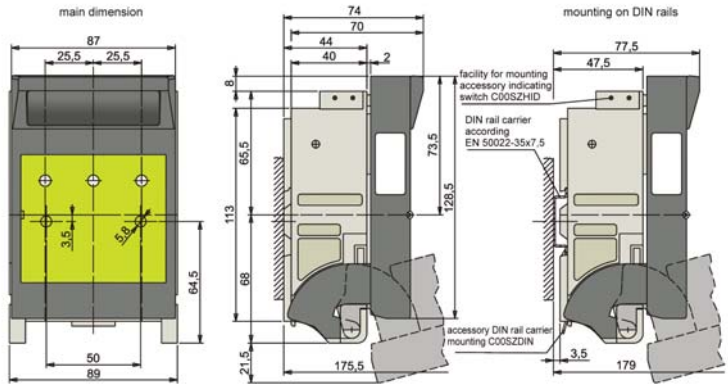
References and dimensions

703

NH 000 fuse switch

References	Thermal rating	Fuse size	Poles	Terminal	Weight
703	100 A	NH 000	3	direct connection terminal 1.5–50 mm2	0,46 kg

Dimensions



711

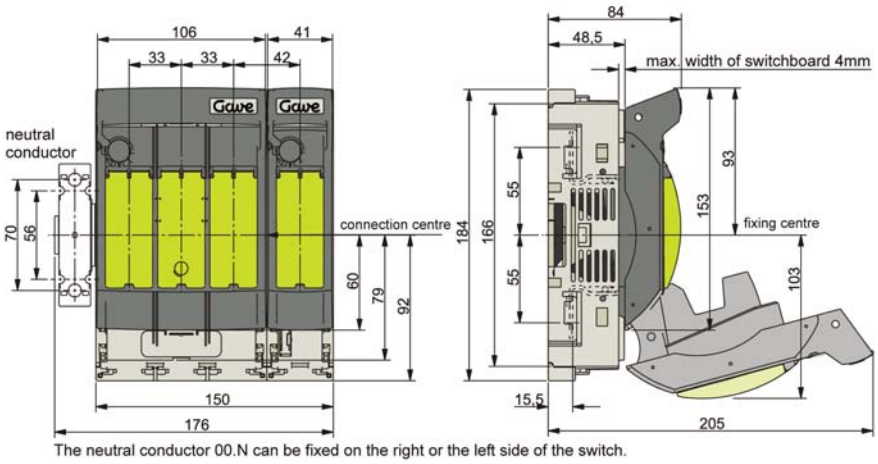
713

714

NH 00 fuse switch

References	Thermal rating	Fuse size	Poles	Terminal	Weight
711	160 A	NH 00	1	screw M8	0,32 kg
713	160 A	NH 00	3	screw M8	0,74 kg
714	160 A	NH 00	4	screw M8	1,04 kg

Dimensions



The neutral conductor 00.N can be fixed on the right or the left side of the switch.

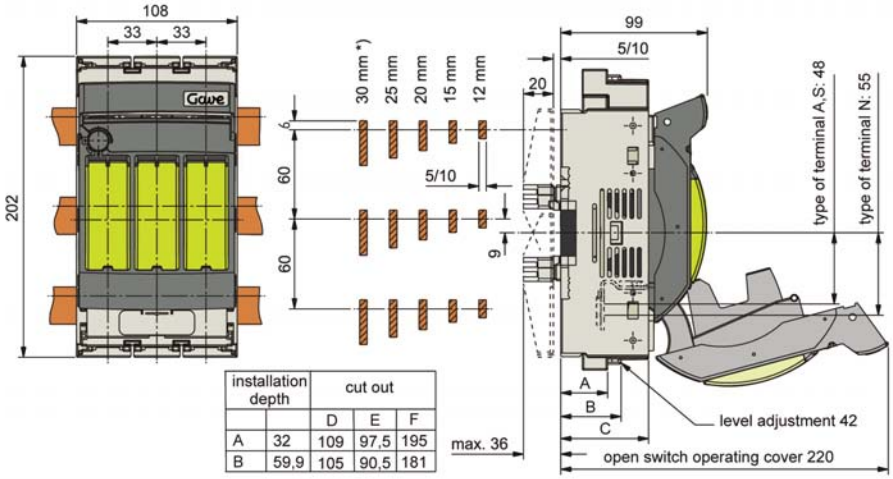
713PC

NH 00 fuse switch

Direct installation on to bus bar systems

References	Thermal rating	Fuse size	Poles	Terminal	Weight
713PC	160 A	NH 00	3	for 60 mm bus bar systems. Screw M8	1,04 kg

Dimensions



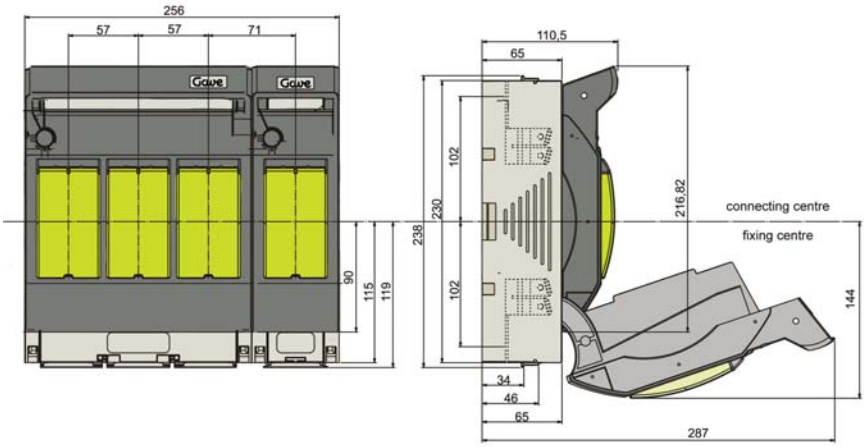
installation depth		cut out		
		D	E	F
A	32	109	97,5	195
B	59,9	105	90,5	181

733

NH 1 fuse switch

References	Thermal rating	Fuse size	Poles	Terminal	Weight
731	250 A	NH 1	1	screw M10	1,00 kg
733	250 A	NH 1	3	screw M10	2,42 kg
734	250 A	NH 1	4	screw M10	3,42 kg

Dimensions



References and dimensions

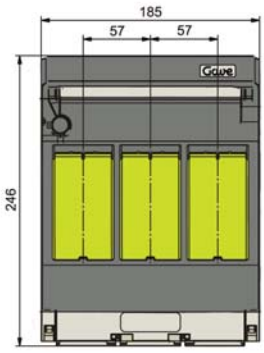
733PC

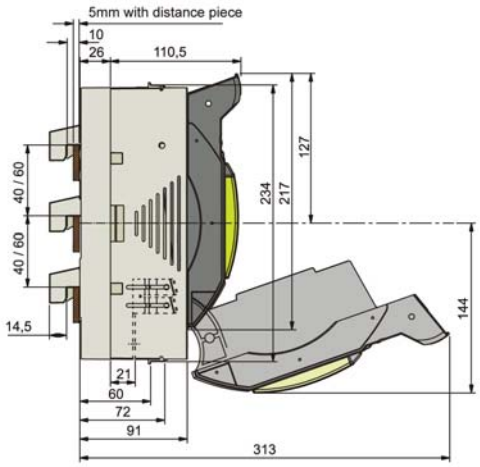
NH 1 fuse switch

Direct installation on to bus bar systems

References	Thermal rating	Fuse size	Poles	Terminal	Weight
733PC	250 A	NH 1	3	for 40-60 mm bus bar systems. Screw M10	3,12 kg

Dimensions



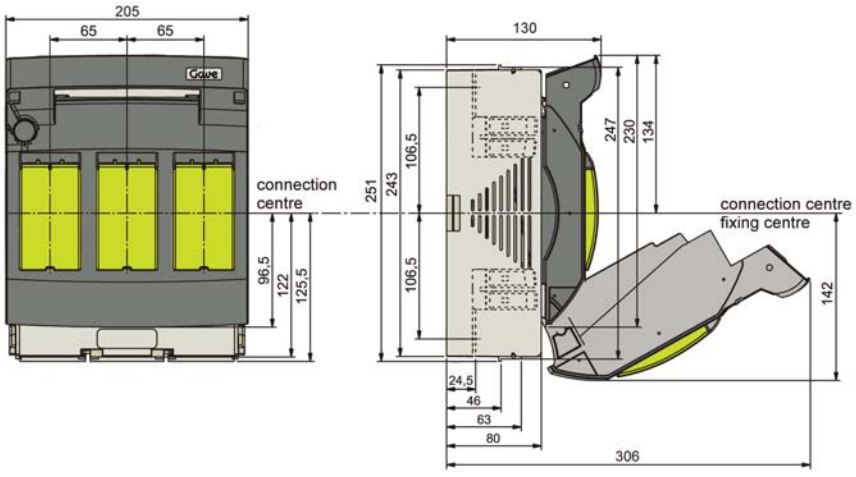


743

NH 2 fuse switch

References	Thermal rating	Fuse size	Poles	Terminal	Weight
743	400 A	NH 2	3	screw M10	3,47 kg

Dimensions



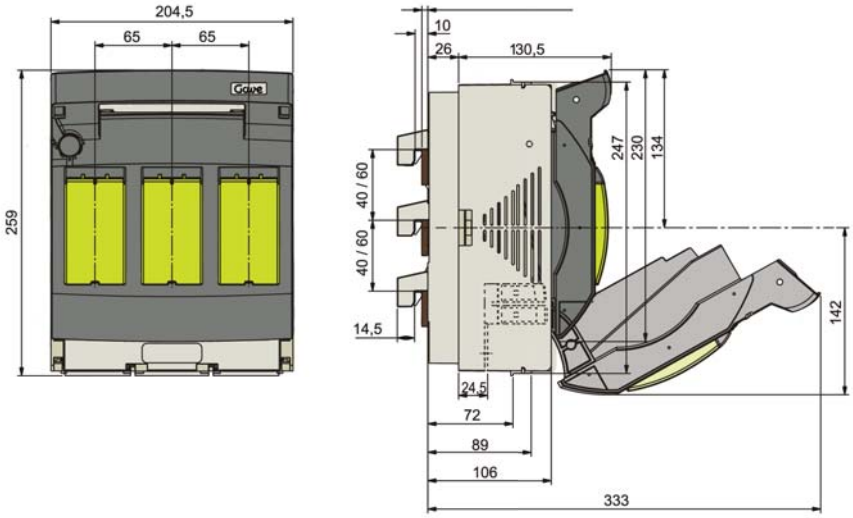
743PC

NH 2 fuse switch

Direct installation on to bus bar systems

References	Thermal rating	Fuse size	Poles	Terminal	Weight
743PC	400 A	NH 2	3	for 40-60 mm bus bar systems. Screw M12	4,50 kg

Dimensions

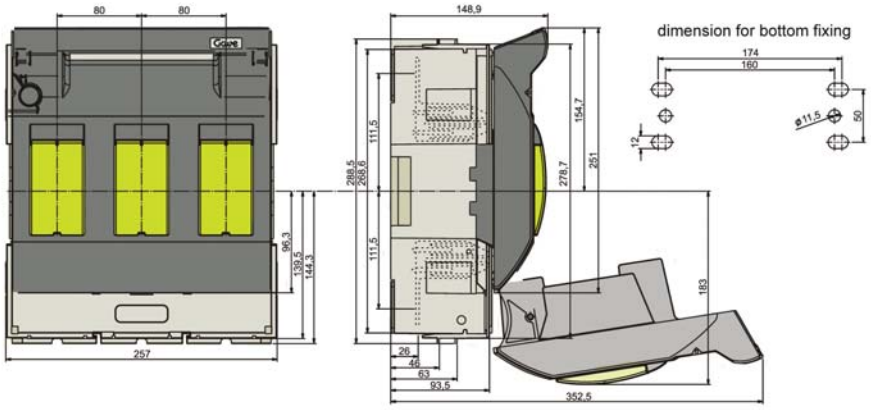


753

NH 3 fuse switch

References	Thermal rating	Fuse size	Poles	Terminal	Weight
753	630 A	NH 3	3	screw M12	4,94 kg

Dimensions



Accessories

Terminal cover

References	Thermal rating	Poles	Switch disconnector	Pieces	Weight
711PROT	160	1	711	2	0,02 kg
713PROT	160	3	713	2	0,04 kg
731PROT	250	1	731	2	0,09 kg
733PROT	250	3	733	2	0,25 kg
743PROT	400	3	743	2	0,22 kg
753PROT	630	3	753	2	0,32 kg

Bus bar touch protection

References	Thermal rating	Poles	Switch disconnector	Pieces	Weight
713PCPROT	160	3	713PC	2	0,05 kg
733PCPROT	250	3	733PC	2	0,13 kg
743PCPROT	400	3	743PC	2	0,22 kg

Cover sealing device

References	Description	Weight
7BLOC	installation set for 711,713,714,731,733,734 and 733PC	0,05 kg

Auxiliary contacts indication

References	Description
	available different models upon request

Technical data

		NH 000	NH 00	NH 1	NH 2	NH 3
conventional free air thermal current with fuse links Ith		100 A	160 A	250 A	400 A	630 A
max. allowed power dissipation of NH-fuse links Pn		7.5 W	12 W	23 W	34 W	48 W
conventional free air thermal curent with solid links Ith		-	200 A	400 A	630 A	780 A
max. allowed power dissipation of solid links Pn		1.2 W	1.2 W	2.6 W	9 W	17,5 W
utilization category	voltage Ue	current Ie				
AC 21 B	690 V	100 A	125 A	200 A	315 A	500 A
AC 21 B	400 V	100 A				
DC 21 B[1)]	440 V	100 A				
AC 23 B	400 V	-	160 A	250 A	400 A	630 A
AC 22 B	500 V	-	160 A	250 A	400 A	630 A
DC 22 B	220 V	-	160 A	250 A		
DC 21 B [1)]	440 V	-	-	-	400 A	
rated operational voltage Ue		690 V	690 V	690 V	690 V	690 V
rated insulation voltage Ui		690 V	1000 V	1000 V	1000 V	1000 V
rated impulse withstand voltage Uimp		6kV	8 kV	12 kV	12 kV	12 kV
rated frequency		50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz
degree of protection		IP20	IP20	IP20	IP20	IP20
pollution degree		3	3	3	3	3
rated duty		uninterrupted duty	uninterrupted duty	uninterrupted duty	uninterrupted duty	uninterrupted duty
rated short-circuit making capacity with solid links Icm		-	6.2 kAsw	8.2 kAsw	10.6 kAsw	18,6 kAsw
rated short-circuit making capacity with fuse links						
	400 V AC	80 kA Ie = 100 A	80 kA Ie = 160 A	80 kA Ie = 200 A	80 kA Ie = 400 A	80 kA Ie = 630 A
	500 V AC	-	80 kA Ie = 160 A	80 kA Ie = 200 A	80 kA Ie = 400 A	80 kA Ie = 630 A
	690 V AC	-	50 kA Ie = 125 A	80 kA Ie = 200 A	80 kA Ie = 315 A	50 kA Ie = 500 A
rated short-time withstand current with solid links Icw		-	4 kA / 1 s	8 kA / 1 s	13 kA / 1 s	18 kA / 1 s
power dissipation Ith without NH-fuse links		9 W	2.3 W	3.5 W	20 W	40 W
power dissipation Ith without solid links		-	3.3 W	8 W	50 W	150 W
cable terminal connections						
standard terminal		direct 1.5-50 mm²	M8	M10	M10	M12
for cable lugs			max. 2 x 70 mm²	2 x 150 mm² Cu 2 x 185 mm² Al	2 x 185 mm² Cu 2 x 240 mm² Al	2 x 240 mm² Cu 2 x 300 mm² Al
for copper bus bars with max. width			20 mm	18 mm	35 mm	40 mm

[1)] All poles in series